

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): A method for identifying a
2 momentary acoustic scene, said method including
3 - an extraction, during an extraction phase, of
4 characteristics from an acoustic signal captured by
5 at least one microphone (2a, 2b), wherein at least
6 auditory characteristics are extracted and
7 - an identification, during an identification phase, of
8 the momentary acoustic scene on the basis of the
9 extracted characteristics by mapping the extracted
10 characteristics to specific individual sound sources
11 of a plurality of different sound sources and
12 - selecting and executing a process for analyzing and
13 modifying an acoustic signal, said process taken
14 from a plurality of available processes based on the
15 identified momentary acoustic scene.

1 Claim 2 (previously presented): Method as in claim 1,
2 wherein, for the identification of the characteristic features
3 during the extraction phase, Auditory Scene Analysis (ASA)
4 techniques are employed.

1 Claim 3 (previously presented): Method as in claim 1,
2 wherein, during the identification phase, Hidden Markov Model
3 (HMM) techniques are employed for the identification of the
4 momentary acoustic scene.

1 Claim 4 (previously presented): Method as in claim 1,
2 wherein at least one of the following auditory characteristics
3 are identified during the extraction of said characteristic
4 features: loudness, spectral pattern, harmonic structure,

5 common build-up and decay processes, coherent amplitude
6 modulations, coherent frequency modulations, coherent
7 frequency transitions and binaural effects.

1 Claim 5 (previously presented): Method as in claim 1,
2 wherein at least one non-auditory characteristic is identified
3 in addition to the auditory characteristics.

1 Claim 6 (previously presented): Method as claim 1,
2 wherein the auditory characteristics are grouped along Gestalt
3 theory principles.

1 Claim 7 (previously presented): Method as in claim 6,
2 wherein the extraction of characteristics and/or the grouping
3 of the characteristics are performed either in context-free or
4 in context-sensitive fashion, and further including the step
5 of taking into account information relative to a signal
6 content to thereby provide an adaptation to the acoustic
7 scene.

1 Claim 8 (previously presented): Method as in claim 1,
2 wherein, during the identification phase, data are accessed
3 which were acquired in an off-line training phase.

1 Claims 9-18 (canceled).

1 Claim 19 (currently amended): A method for identifying
2 and selecting an appropriate process for analyzing an acoustic
3 signal, said method including

- 4 - an extraction, during an extraction phase, of
- 5 characteristics from said acoustic signal, wherein
- 6 at least auditory characteristics are extracted ;
- 7 - an identification, during an identification phase, of a
- 8 momentary acoustic scene on the basis of the

9 extracted characteristics by mapping the extracted
10 characteristics to specific individual sound sources
11 of a plurality of different sound sources;
12 - selecting a process for analyzing the acoustic signal
13 based on the identified momentary acoustic scene,
14 wherein said suitable process is chosen from a
15 plurality of available processes for analyzing the
16 acoustic signal; and
17 - executing said selected process to generate and output
18 a processed acoustic signal.

1 Claim 20 (previously presented): The process of claim 19,
2 wherein said extraction includes the step of analyzing the
3 acoustic structure of the acoustic signal for identifying
4 tonal signals in acoustical signals generated by speech and
5 tonal signals generated by music.

1 Claim 21 (previously presented): The process of claim 19,
2 wherein said extraction applies the principles of gestalt
3 analysis for acoustical signals generated by speech and tonal
4 signals generated by music.

1 Claim 22 (previously presented): The process of claim 21,
2 wherein said gestalt analysis includes examining a qualitative
3 property chosen from the group consisting of continuity,
4 proximity, similarity, common density, unit, and good
5 constancy.

1 Claim 23 (previously presented): The process of claim 19,
2 wherein said executing said selected suitable process includes
3 the step of processing said acoustic signal to generate a
4 hearing signal for improving the hearing ability of a user.

1 Claim 24 (previously presented): The process of claim 19

2 further including the step of generating an audio signal from
3 said processed acoustic signal for transmission to a user.

1 Claim 25 (currently amended): A method for identifying
2 and selecting an appropriate process for analyzing an acoustic
3 signal, said method including

- 4 - an extraction, during an extraction phase, of
5 characteristics from said acoustic signal including
6 the step of analyzing the acoustic structure of the
7 acoustic signal for identifying tonal signals in
8 acoustical signals generated by speech and tonal
9 signals generated by music, wherein at least
10 auditory characteristics are extracted ; and
- 11 - an identification, during an identification phase, of a
12 momentary acoustic scene on the basis of the
13 extracted characteristics by mapping the extracted
14 characteristics to each of a plurality of specific
15 individual sound sources, and further wherein said
16 identification includes the use of hidden markov
17 models; and
- 18 - selecting a process for analyzing the acoustic signal
19 based on the identified momentary acoustic scene,
20 wherein said suitable process is chosen from a
21 plurality of available processes, said process for
22 improving the hearing ability of a user;
- 23 - executing said selected process, said executing
24 including the step of processing said acoustic
25 signal to generate a processed audio signal; and
- 26 - generating an audio signal from said processed acoustic
27 signal for transmission to said user.

1 Claim 26 (previously presented): A method for identifying
2 and selecting an appropriate process for analyzing an acoustic
3 signal, said method including:

- 4 - an extraction of at least auditory-based characteristic
- 5 features from an acoustic signal, wherein said
- 6 auditory characteristics include one or more of:
- 7 volume, spectral pattern, harmonic structure, common
- 8 build-up and decay times, coherent amplitude
- 9 modulations, coherent frequency modulations,
- 10 coherent frequency transitions, and binaural
- 11 effects; and
- 12 - an identification of the momentary acoustic scene on
- 13 the basis of the characteristics not limited to
- 14 speech characteristics; and
- 15 - automatically selecting a hearing process for execution
- 16 by a hearing device from a plurality of available
- 17 processes based on the identified momentary acoustic
- 18 scene.

1 Claim 27 (previously presented): The method of claim 26,
2 wherein said identification includes at least a determination
3 of whether the momentary acoustic scene includes speech,
4 music, or some other auditory activity.

1 Claim 28 (previously presented): The method of claim 26,
2 further comprising a step of grouping the characteristic
3 features according to: continuity, proximity, similarity,
4 common density, unit, and good constancy; wherein said
5 grouping supports the identification of the momentary acoustic
6 scene.

1 Claim 29 (previously presented): A method for identifying
2 a momentary acoustic scene for a hearing device, said method
3 including
4 - an extraction, during an extraction phase, of
5 characteristics from an acoustic signal captured by

6 at least one microphone, wherein at least auditory
7 characteristics are extracted and
8 - an identification, during an identification phase, of
9 the momentary acoustic scene on the basis of the
10 extracted characteristics; and
11 - selecting and executing an audio signal analyzing
12 process for execution in a hearing device, from a
13 plurality of available audio signal analyzing
14 processes based on the identified momentary acoustic
15 scene, said audio signal analyzing process for
16 execution in a hearing device for improving the
17 hearing of a user.

1 Claim 30 (previously presented): The method of claim 29,
2 further comprising a step of grouping the characteristic
3 features according to: continuity, proximity, similarity,
4 common density, unit, and good constancy; wherein said
5 grouping supports the identification of the momentary acoustic
6 scene.

1 Claim 31 (previously presented): The process of claim 29,
2 wherein said execution generates a processed acoustic signal,
3 said process further including the step of said hearing device
4 generating an audio signal from said processed acoustic signal
5 for transmission to a user to aid the hearing of the user.